**W05 Team Activity: Designer**

**Review the Program Specification**

1. What does the program do? Helps the user memorize scriptures passages by hiding random words and replacing them with an “\_”.
2. What user inputs does it have? The user can press the ‘Enter’ key to hide additional words or type “quit” to exit the program.
3. What output does it produce? Pressing ‘Enter’ hides additional words and typing “quit” exits the program.
4. How does the program end? Typing “quit” into the console.

**Determine the classes**

1. What are good candidates for classes in this program?
   1. Scripture
   2. Reference
   3. Word
2. What are the primary responsibilities of each class?
   1. Scripture – this class can be used to hold the reference and the text of the scripture. Also hides words from the text
   2. Reference – Manage book, chapter, and verse information.
   3. Word – Tracks words whether they are hidden or not

**Define class behaviors**

1. What are the behaviors this class will have in order to fulfill its responsibilities? (In other words, what things should this class *do*?)
   1. Scripture – Hide words, pull scripture text, private string
   2. Reference – holds the book reference, the chapter, and the verse, private string
   3. Word – extracts individual words from the scripture text then either hide or show the word

**Define class attributes**

1. What attributes does this class need to fulfill its behaviors? (In other words, what variables should this class *store*?)
   1. Scripture – string text that holds the scripture text.
   2. Reference – private string \_book - holds the book of the reference.

private int \_chapter - holds the chapter of the reference.

private int \_verse - holds the verse of the reference.

* 1. Word – private words: array or list of words extracted from the scripture text.

1. What are the data types of these member variables?
   1. Scripture – string text
   2. Reference – string book, int chapter, int verse
   3. Word – Array of words
2. What constructors should each class have?
   1. Scripture – take the text string parameter to initialize the text attribute.
   2. Reference – parameters for book, chapter, and verse
   3. Word - scripture text as a parameter to initialize the word attribute

**Define Constructors**

1. What constructors should each class have?
   * In other words, what parameters should you pass in when creating an object of that type.
   1. Scripture – getters to retrieve the scripture verse
   2. Reference – getters to retrieve the scripture reference, i.e. chapter, verse, name
   3. Word – hold the scripture text and hidden word
2. What other work needs to be done to set up these objects?
   * For example, does the constructor need to run code to perform set up tasks, like creating lists, iterating through variables, etc.